

Effects of Medicare and Medicaid on Access to and Quality of Health Care

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IT IS CUSTOMARY IN MYTH AND LEGEND to assign impossible tasks to those whom one would destroy. It is almost such a task that confronts any who would attempt to give a brief, but definitive, account of the impact of Medicare and Medicaid on access to medical care and on quality. The information is incomplete, and what there is of it is often refractory to easy generalization. I will, therefore, attempt nothing more than an interpretation of the situation as I see it. As such, what I say is more of an informed opinion than fully demonstrable fact.

Access to Care

Defining access as the actual use of health services, one can expect programs such as Medicaid and Medicare, by reducing out-of-pocket payments, to enhance, primarily, the use of services that are included as benefits and, secondarily, the use of other services as well. But this enhancement is not likely to be uniform. It will be more marked for services that were not previously included in program benefits, or were included to a lesser degree; for population groups that were formerly deprived because of poverty or lack of coverage under voluntary or public programs; and for health conditions ordinarily regarded as less severe and threatening. The increase in utilization is counteracted to varying degrees by deductibles, copayments, and limits on benefits (especially as prices continue to rise); by the persistence and relatively greater salience of the costs that are not reduced by the plan (including the time used and the income lost because of receiving care); and by a variety of barriers that include geographic nonavailability, cultural incongruence, social prejudice, and personal ignorance or alienation. In the absence of such barriers one would expect that differences in use of service by

income or social class would diminish, since persons in the less favored classes have more unmet needs and lower ability to pay until the program comes to their aid. It is likely that such equalization will be further enhanced by relative restrictions on supply, because the professional choices that have to be made under these conditions will tend to favor the more significant needs of the hitherto deprived. Differences are more likely to persist if the supply of services can be expanded to meet the demand by all segments of the population and, especially, if barriers to access to care continue. In some circumstances, the remaining barriers may be so handicapping to some segments of the population that differences in the use of services may be widened rather than narrowed. Programs that are large in scale but limited in population coverage create additional difficulties, because they are able to divert resources from those who are not eligible to those who are. In doing so, they may, paradoxically, create new foci of relative, or even absolute, deprivation in population groups that are just outside the limits of eligibility. Such deprivation is especially likely when these population groups must bear the brunt of price increases that have been fueled by the programs that benefit others.

These are the general rules that govern our expectations. More specifically, Medicaid is expected to have a direct effect mainly on the categorized poor, most of whom are children, young mothers, and the aged, as well as, to varying degrees, on the near-poor in these same categories. But these effects will vary from State to State, in extent as well as magnitude. They will vary in extent because the States have considerable discretion as to what groups will be included and the criteria that define each group. The effects will vary in magnitude because of differences in the number and amounts of

current benefits as well as the relative expansion of these benefits as compared with the benefits available before the institution of Medicaid. To the extent that geographic variations with respect to these factors are also associated with differences in income, race, or other population attributes, secondary correlations will be set up that can surprise and mislead the unwary.

Medicare is, of course, much more uniform with respect to coverage and benefits than Medicaid. But the aged are by no means a homogeneous category with respect to the attributes that might modify the impact of Medicare. The aged poor are likely to have received care under public assistance programs in previous years and to currently receive supplementary benefits under Medicaid. Those who are better off are more likely to have had health insurance before the institution of Medicare, to have purchased supplementary insurance since, and to be able to meet the deductibles and copayments levied by Medicare. Finally, the very aged differ from the newly aged, and both groups differ from the young, in a variety of demographic, social, and psychological attributes that are likely to influence their behavior in seeking care.

And underlying this complex superstructure of attributes, some working in contrary directions to each other, are the vast, but unevenly distributed, stores of persistent and constantly erupting illnesses which, like a subterranean fire, drive the medical care engine—powerfully aided, no doubt, by the availability of those professionals who stand ready to control and direct it in the interests of their patients, but also in their own. It is no wonder, then, that our examination of the empirical evidence bearing on the impact of Medicare and Medicaid, although it meets our expectations in many respects, not infrequently presents us with aberrant findings that are difficult to explain, assuming the data were fully valid in the first place. But to this evidence, however flawed, we must now return.

Important as they are, Medicare and Medicaid can perhaps be best seen in a historical perspective, as events that reinforced, rather than initiated, a line of development already considerably advanced, toward more equal access to some health services (1a). I imagine that at some time in the not too distant past all medical care services were less frequent among the poor than among the rich, with the exception of hospital care, which was reserved mainly for the poor, since the rich were cared for in their homes. However, as medicine

advanced, hospitals became not only respectable but also necessary, so that by the early 1930s the use of hospital services became more frequent among the rich than among the poor (2). Since then, all classes have made ever greater use of the hospital, but the poor have done so at a faster rate. By the early 1950s, no clear differences were apparent in the use of the hospital by various income groups. Now the poor make greater use of the hospital than do the rich. In this journey toward equalization and eventual reversal, it appears that young and middle-aged adults started earlier and went further until Medicare and Medicaid allowed the younger and older age groups to catch up.

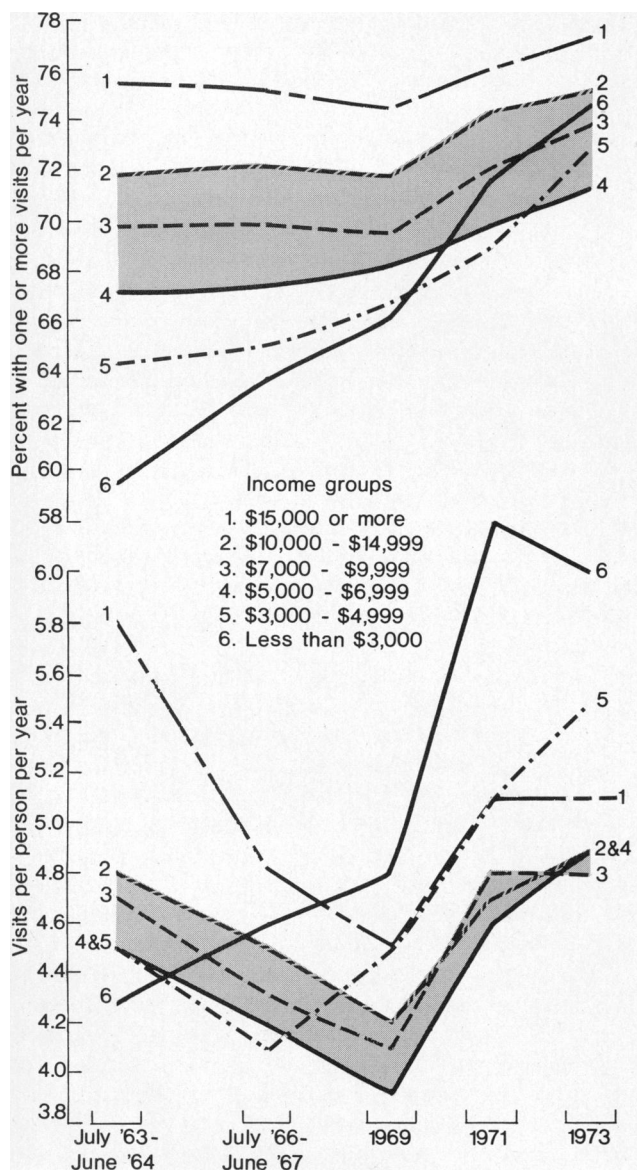
The use of physicians' services most probably always has been higher among the well-to-do. This group's advantage persisted for many years longer in respect to physicians' services than in respect to hospital use. Only since the advent of Medicare and Medicaid has this gradient disappeared and a little progress been made toward reversal. But even now, both poor children and the aged who are poor use the services of a physician outside the hospital somewhat less than their counterparts who are not poor (3,4). As to the gradients in dental care, these have always been steeply adverse to the poor and have remained virtually unchanged in recent times.

The forces that have brought about these progressions and invariances can only be surmised. But it is reasonable to assume that they are an expression of the joint effects of (a) the differential valuations placed on the several services, (b) the incorporation of these valuations in the benefits of voluntary and public programs for financing health services, (c) the differential growth and uneven spread of eligibility for such programs throughout the population, and (d) other changes in the level and social distribution of the standard of living.

The effects that are more specifically attributable to Medicare and Medicaid can be inferred, subject to some uncertainty, by focusing on the periods closely preceding and following their institution. The chart shows the data for physicians' visits (5a). Two or three years before the institution of Medicare and Medicaid, one finds the income groups almost perfectly ordered, from high to low, in their propensity to seek care as well as in the total volume of services received. The introduction of Medicare and Medicaid had at first little effect on, and later reduced somewhat, the propensity of the higher income groups to seek care. By contrast, the lower income groups (in particular, the lowest) sought care more frequently, so that by 1969, although the income groups were still perfectly ordered, the differences between them had narrowed considerably. The changes in total consumption of physicians' services were more radical and reflected not only changes in the relative likelihood of receiving care but, also, changes in the amount of care received once care was sought. As a result, the lowest income groups increased their use of services at the expense of all other income groups, and

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Use of physicians' services by various income groups in the United States during specified periods, 1963-73



SOURCE: Based on data in reference 5a.

particularly at the expense of the highest. Thus, one finds that by 1969 the traditional ordering of use of physicians' services by income had begun to crumble. All these events conform well to the postulates that I advanced earlier concerning the greater relative advantage of the lower income groups in the competition for scarce resources, once the financial barrier has been breached. But since 1969, the picture has undergone an interesting change. Now all income groups seem to have taken an upward swing in seeking and using the services of physicians, except that the lower income groups have continued to do so at a higher rate.

This change in the trend seems too large to be explained by changes in survey methods that, admittedly, interfere with the comparability of data from one period to another (5b). It suggests, rather, an expansion in the supply of physicians' services, aided perhaps by restrictions on escalation in prices and stricter controls on the use of hospital services as a substitute for office care. In any event, by 1973 the long familiar ordering by income group had been totally disrupted, perhaps never to be seen again.

A simple summary of the redistributions in health services that occurred between 1964 and 1973 can be offered if the lowest one-fifth of the population in the array of incomes in each year is assumed to represent the poor (4). This lowest one-fifth corresponds to persons with a family income under \$3,000 in 1964 and under \$6,000 in 1973. One finds, then, that the use of physicians' services increased among all categories: among the poor and nonpoor, whites and nonwhites, as well as among children, adults, and the aged. However, redistributions in health services occurred. Those who gained most were poor white children and poor blacks in all age groups, but especially children and young adults. Those who gained the least were the nonpoor whites; the nonpoor blacks gained to a moderate degree.

Considerable redistribution also occurred in the use of hospital services measured in patient days of care. Once again, poor blacks, in particular children and young adults, acquired a relatively larger share by increasing their levels of use. This increase occurred mainly at the expense of actual reductions in the use of hospital care by nonpoor whites, but also by some smaller reductions in such use by some categories of poor whites and nonpoor blacks.

The experience of the aged during this period deserves special attention, since almost all were covered by Medicare, and some also were covered by Medicaid. Among the aged, the greatest gains in hospital days were among nonpoor blacks and poor whites. The greatest gains in the use of physicians' services were among blacks, whether poor or nonpoor, while aged nonpoor whites actually reduced their use of physicians' outpatient services.

As to the balance between the aged and the nonaged, the net effect of the forces active in the medical care market since the advent of Medicare and Medicaid has been to favor the nonaged in the use of physicians' services outside the hospital and to favor the aged in the use of inpatient hospital care. A more detailed examination of the changes in hospital caseloads shows that admissions of aged patients became more frequent and the average stay became longer, with little change in the case mix. By contrast, there were fewer admissions of patients younger than 65 and a shift in the case mix in favor of diagnoses entailing a longer average stay. However, when corrections are made to account for the change in the case mix, the average length of stay

of patients under 65 actually declined (6).

From the findings described, it is possible to draw the comforting inference that the groups of persons who were previously most disadvantaged have made the greatest strides since the advent of Medicare and Medicaid. But it is not possible by observing national trends to tease out the specific contributions of these two programs from the knotty tangle of concurrent events. One might even wonder whether Medicare and Medicaid may not have imposed new hardships on some. I shall briefly address these difficult questions.

More specific inferences concerning the response of the aged to Medicare and, to a lesser extent, to Medicaid can be drawn from a study of utilization patterns during the year preceding and the year following the implementation of Medicare in two representative nationwide samples of persons 65 and over who were also recipients of social security benefits (7). During this relatively short period, there was virtually no change in the proportion of persons who visited a physician, and there was a small reduction, rather than an increase, in the yearly number of visits per person. By contrast, admissions to short-term hospitals increased a little more than 10 percent, and length of stay increased more than 10 percent during the survey year, resulting in about a 25 percent increase in patient days overall. The increase in hospital use was larger for the more aged among the aged, for blacks as compared with whites, for the South as compared with other regions, and for nonmetropolitan areas as compared with other areas. Unexpectedly, income did not make much difference; nor was there a clear relationship with education. These findings are generally in line with those I have described earlier, and they reinforce the impression that the populations believed to have been deprived have benefited more, but the lack of a strong relationship with income is an aberrant observation.

Further evidence of the specific effects of Medicare comes from an examination of the effects of its deductibles and copayments (1*b*,8,9). These studies suggest that when persons who have experienced illness serious enough to cause hospitalization are excluded, use of service is enhanced by the concurrent presence either of Medicaid or of health insurance supplementary to Medicare. Least favored are the persons with low to moderate incomes who have neither.

More of the specific effects of Medicaid can be seen in findings of national and local studies that distinguish between the poor who are eligible for Medicaid benefits and those who are not. Using data from the National Health Survey for 1969, Davis and Reynolds arrived at a rough separation of eligibles from noneligibles by dividing persons with a family income under \$5,000 into those who received public assistance and those who did not (10). The comparison revealed decidedly higher rates of physician and hospital use among the recipients of public assistance, even when adjustments were made for differences in health status

and age. It also showed that eligibility for public assistance was associated with an increment of physician visits (but not of hospital use) for Medicare eligibles who were poor. In other local surveys, Rabin and associates reported for Baltimore (11,12), and Richardson for three urban poverty areas (13), that persons covered by Medicaid used more services than poor persons who were not.

Local surveys reflect the special circumstances of the areas where they are conducted, and for that reason they cannot lead to generalizations on statistical grounds. They do, however, provide information that sometimes gives us a more detailed view of the interplay of the forces at work and allows us to test our theory. The result of the test will either reinforce or weaken our confidence in our ability to generalize from that theory. Subject to the pitfalls of post hoc interpretation, we can find in the reports of these local surveys generally reassuring confirmation of the expected effect of the level of prior benefits, of changes in benefits, and of the magnitude and salience of the need for care as these are influenced by income.

For example, Olendzki and associates followed a group of welfare recipients from a defined area of New York City for a period of some years preceding and following the institution of Medicaid (14). In this select population that had had very generous health benefits, the introduction of Medicaid had little effect on the use of physicians' services. There were, however, unexplained redistributions of health services in favor of younger persons, women (probably mothers with children), and Puerto Ricans and not in favor of males and the elderly. As to the joint effects of severity of illness and income, Richardson found that the effects of Medicare and Medicaid on increasing the frequency of initial physician contacts and revisits was more marked among the poor than the nonpoor, and for illness episodes rated by the physician to be not serious as compared with those rated serious. (13). Rabin and Schach reported that the increment in access to the physician by those who were covered by Medicaid was most clearly demonstrable in the category considered to be healthy (12). There is also a pattern in the data reported by Davis and Reynolds that suggests that the healthier the person, the higher the relative increase in physician and hospital use associated with having public assistance (10*a*). And, finally, if additional evidence is required, one would find it in the remarkably prompt and unequivocal reduction in services under the threat of cutbacks in Medicaid benefits in California, and in their equally rapid restoration, although to somewhat less than their usual levels, when the threat was removed (15).

It is clear that the conclusions which flow from studies that have focused more sharply on eligibility for Medicare and Medicaid tend to support the major inferences that I have drawn from the more general national trends. But one still must ask whether, in re-

cent times, all unjustified differences in use of services have been erased. The answer is not completely clear.

Surveys by Sparer and Okada of 10 urban low-income neighborhoods in different parts of the country showed that the poor made more visits to physicians than the nonpoor, even when adjustments were made for age and for the prevalence of chronic conditions classified by activity limitation (16). Rabin and associates also reported that in Baltimore, there was greater access to physicians by those who had Medicaid coverage as compared with those who were not poor, after corrections had been made for the presence of acute or chronic illness, or both (11,12). Brian and Gibbens found that in California, Medicaid beneficiaries who reported having had any of 15 symptoms or conditions during a period of 4 weeks were more likely to say that they had seen a physician for each symptom or condition than was a representative sample of the civilian population of the State (17). Nevertheless, Roghmann and associates reported that in Rochester, N.Y., children covered by Blue Cross used more preventive and illness-related physicians' services than did those who were covered by Medicaid. Only with respect to illness-related visits that excluded telephone consultation did those who had Medicaid exceed their counterparts who had Blue Cross coverage (18). By contrast, Rabin and Schach found that in Baltimore, those covered by Medicaid had as many physical examinations as those who were not poor and received only slightly fewer immunizations (12).

All these findings pertain to urban areas, where public services are likely to be more available than elsewhere. The picture, nationwide, could be different. Based on a national survey of the civilian population, Andersen and associates reported that physician contacts per 100 days of disability were positively related to urban residence and income, being highest among the urban nonpoor and lowest among the rural poor, with no differences by race (19). A more detailed analysis of the 1969 National Health Survey by Davis and Reynolds (10) confirmed these findings, but only in part. When adjustments were made for health status, the poor used fewer physician and hospital services than the well to do, even when the poor qualified for public assistance. Within the category of public assistance, after adjustments were made for health status and other characteristics, persons who lived in the South used fewer services, and blacks in the South, as well as elsewhere, received fewer services than did whites.

Perhaps a reasonable conclusion is that use of services nationwide is still not fully congruent with need. However, in certain urban communities, although not in all, parity in the volume of physician and hospital services may have been attained. But this last statement is subject to serious challenge because the adjustments to differences in health status are still crude. And, of course, aspects of care besides volume still remain to be explored, which brings us to the subject of quality.

Quality of Care

It is useful to begin the discussion of quality of care, as I did under the heading "Access to Care," with a statement as to what one would expect the impact of Medicare and Medicaid on quality to be, and then continue with an examination of the meager and fragmented evidence that has a bearing on this subject. But, first, one must define quality in such a way as to make the entire enterprise a little less intimidating than it already is. In this spirit, I will define quality, very modestly, as the appropriate application of medical knowledge, with due regard to the balance between the hazards inherent in every medical intervention and the benefits expected from it. As to cost, I will take the position that unnecessary services and the use of more costly procedures or sites of care without distinct gains in effectiveness represent a lesser level of quality because they signify poor medical judgment and social waste. This definition will lead to interim estimates of quality. The final proof may be found elsewhere in this issue, in the papers on health status and on the quality of life.

These considerations take us back to my earlier discussion of access to care and the quantity of services received. Obviously, quantity is a necessary, though not sufficient, prerequisite of quality. To the extent that segments of the population that were formerly deprived have gained access to care, an opportunity has been created for improvements in quality; to the extent that use is still insufficient relative to need, progress toward the attainment of quality is impeded. But access to larger quantities of care has hazards of its own. It exposes people to care that may be unnecessary, although harmless. More often, unnecessary care is also associated with a variety of dangers of different magnitudes and probabilities of occurrence.

The extent to which the wasteful and potentially harmful consequences of access to care are experienced depends a great deal on the nature of program benefits, on the attributes of the sources of care, on the clients' ability to recognize and reject care of poor quality, and on the steps taken by the program to do the same.

Program benefits should, ideally, include a comprehensive range of services so that there are no barriers to selecting the combination and sequence of services that are least costly and most effective in any given situation and so that appropriate attention can be given to prevention and rehabilitation, both physical and social. Under Medicare, the inclusion of rehabilitation services in extended care facilities and of physical, occupational, and speech therapy in home health services should have a positive impact. On the other hand, the exclusion of routine physical examinations, immunization, and vision or hearing tests is seen as interposing barriers to preventive care, which is further penalized by the requirement for paying the deductible.

It is difficult to generalize concerning program benefits under Medicaid since, beyond the core of mandatory requirements, they vary so widely among the States

in scope and quantity. However, the potential exists for providing a much broader range of services than under Medicare, and in many States this potential has been realized. Moreover, the more recent emphasis on periodic screening of beneficiaries under 21 should give a much needed boost to prevention and early intervention, even though the development of this effort has been rather slow and incomplete (20).

Under both Medicare and Medicaid, inclusion of the services of nursing homes and home health agencies as well as of hospitals, plus the availability of the services of physicians at all sites, including the office, should make it possible to select the least costly sequence or combination of services and sites of care. To what extent this happens is, of course, a matter for empirical determination (1c).

As to the source of care, one feature of Medicare and Medicaid is that they enlarge the range of choices available to their beneficiaries, including the opportunity to join what has been called the "mainstream" of medical care in the private sector. But in many situations this movement is inhibited partly by the nonavailability of alternatives and partly by the decided attachment of the underprivileged to their usual sources of care in public or quasi-public facilities. This attachment may be, to a large extent, a blessing, since the private practitioners who ordinarily provide care to the poor are not likely to excel in technical quality.

Medicare and Medicaid could improve the sources of care in a variety of ways. The creation of purchasing power in underserved areas could attract independent private practitioners and encourage the establishment of privately sponsored organized care. It could also encourage the establishment of new facilities and programs for the organized delivery of care under quasi-public and public auspices. Finally, the ability of existing facilities and programs to provide more complete or better care can be enhanced by increased revenue and by arrangements to subsidize, through the reimbursement formula, expansions in facilities, personnel, and equipment. But all this can also be turned to evil uses because it provides an opportunity for waste and, even more deplorably, for exploitation by the venal and unscrupulous. This danger is particularly serious because the clients who are the potential victims of such exploitation lack the knowledge, experience, and social support to protect them.

The empirical evidence that bears, directly or indirectly, on these speculations is so varied, so widely dispersed, and so incomplete that it would take a herculean effort to assemble and interpret it. No doubt it is necessary that this job be done, but in this brief and preliminary review I will deal only with selected aspects of the larger question.

I have said that the major direct contribution of Medicare and Medicaid to quality has been their effect on the consumption of services by the formerly disadvantaged. By implication, the Achilles heel of these programs is the extent to which they have also made possi-

ble the provision of unnecessary, hazardous, and inferior care. Three kinds of observations provide some information on this matter: (a) data on the patterns of care under Medicare and Medicaid, (b) the findings and effects of monitoring programs, and (c) changes in the patterns of care associated with receiving it through organized programs.

As I have already mentioned, Lowenstein found that during the first year following Medicare, aged social security beneficiaries scarcely increased their propensity to seek care from physicians (7). However, it appears that once these people sought care, they were sent to the hospital more frequently and remained there longer than before the institution of Medicare. In addition to changes in the volume of hospital use, there was a disproportionate rise in admissions for surgery, which increased by 30 percent, as compared with 10 percent for all admissions. Admissions for cataract surgery more than doubled, whereas those for cholecystectomies almost tripled. In the first year of Medicare, 1 of every 100 aged persons had a cataract operation, and 1 of every 200 had a gallbladder removed.

These observations suggest that patients did not greatly alter their behavior in seeking care, but that physicians may have altered the manner in which they provided services. This suspicion is strengthened when one observes some details of practice in those Michigan hospitals that subscribe to the Professional Activities Study of the Commission on Professional and Hospital Activities (21). During the first year following the implementation of Medicare, surgical operations in these hospitals increased about 15 percent. X-rays and laboratory tests also increased—most of the laboratory tests by more than 20 percent. Blood transfusions increased by 180 percent. The new affluence was eloquently expressed by the virtual disappearance of miniature chest X-rays and their replacement by large plates.

Unfortunately, there is no direct evidence concerning the appropriateness of these changes in patterns of care, to which decisions by physicians must have made a major contribution. The general tendency to excessive surgery, overutilization, and unnecessary use of transfusions makes at least some portion of the increment reasonably suspect. Moreover, one must view with a jaundiced eye the phenomenal increase in cholecystectomies under Medicare, but it is hard to believe that the large increment in cataract operations represents anything other than a considerable reservoir of unmet need or of a demand that was deferred pending the availability of Medicare benefits (1d).

More direct evidence concerning the appropriateness of care for the aged comes from a study by Lyons and Payne of the quality of hospital and office care in Hawaii during 1968. Their conclusion was that care for the elderly at both sites was no better or worse than care for younger adults (22, 23). However, the diagnosis-specific, explicit criteria method used in these assessments has many limitations, including a lack of sensi-

tivity to overutilization, with the exception of admission to the hospital and length of stay (24).

My interpretation of the findings reported by Lowenstein (7) and Payne (21) included the postulate that under prepayment the physician has increased influence in determining the use of services and that this influence may be used for better or worse. In partial support, Rabin and associates reported that visits to physicians by Medicaid beneficiaries were more likely to have been initiated by the physician, that the physician was more likely to have requested a return visit, and that the patient was more likely (although the difference was not statistically significant) to have received an injection or medication (11, 12).

Further information concerning the appropriateness of care under Medicaid comes from programs set up by State and city agencies to monitor such care. For example, Anderson reported that annualized surgical rates during the first 3 months of Medicaid in California (before the institution of Medicare) were about 10 hysterectomies per 1,000 adult women, 10 cataract operations per 1,000 persons 65 and over, and 42 tonsillectomies per 1,000 persons under 18. Anderson noted that these rates were "very high" by comparison with those for the general population (25). As a rough comparison, national data from the Hospital Discharge Survey for 1965 (26) showed approximately 7 hysterectomies per 1,000 females over 15, roughly 5 extractions of the lens per 1,000 persons 65 or over, and about 16 tonsillectomies per 1,000 persons under 15. The abuse of injections also appeared to be rampant during the first 3 months of Medicaid in California; about 8 percent of the physicians treating Medicaid patients apparently claimed approximately one injection for each visit, excluding immunization (25). Also from California, Brian reported that the introduction of a program to monitor hospital admissions and length of stay resulted in a 17 percent drop in patient days of care in one category of Medicaid recipients—AFDC (Aid to Families With Dependent Children) (27). He reported comparable reductions elsewhere in California under a somewhat different system of monitoring hospital use.

But perhaps the most revealing documentation is to be found in a long series of reports from New York City, in which the authors angrily give an astounding account of overutilization, unsatisfactory quality, and downright fraud (28–32). Here one finds, dramatically portrayed, the tenebrous underworld of medical practice. This underworld is populated by physicians who over-prescribe and over-refer, who order or perform excessively frequent diagnostic procedures with demonstrable or suspected benefit to themselves, and who either fail to make visits to nursing homes or who visit regularly but only to make a rapid pass over a large number of patients, which they carefully bill as separate visits to each patient. In this underworld are the pharmacists who dispense less than the quantity prescribed and bill the full amount or who forge the prescribed amount upward and

dispense the amount originally prescribed. Here one also meets the dentists who produce unnecessary and ill-fitting dentures or whose work, when inspected, cannot pass muster or does not match their bills. Here also are the podiatrists who regularly X-ray both feet whether it is necessary or not and who attract customers from long distances by being overly generous in prescribing "therapeutic shoes." Here are the optometrists who dispense glasses, of which about a third are found to be unsatisfactory when inspected. Here one also meets the nursing home operator who has made self-serving arrangements with pharmacists, podiatrists, and others. It is only possible to guess at the scale of this waste and abuse, since the monitoring mechanisms only detect and pursue the most aberrant findings. Bellin and Kavalier estimate that 5 to 10 percent of dental services are of inferior quality, fraudulent, or both (30). In an admittedly nonrepresentative sample of the work of optometrists, only 72 percent were found to be satisfactory. The percentage of providers flagged as exceeding normative tolerance limits varies widely for different items in the practice of different professions: from 1 to 54 percent. But not all these items are equally important; nor are all deviations necessarily unjustified (32).

Further evidence of unnecessary or inappropriate care and of its magnitude can be found by observing what happens when persons who are eligible for Medicare or Medicaid receive care in organized programs that are presumed to have controls on the utilization and quality of care. Several studies have been done in which the experience of Medicaid recipients has been compared with that of other enrollees in prepaid group practice plans. These studies, however, have little bearing on the question unless one wishes to conclude that when providers are not committed to generating maximum services, utilization rates are roughly comparable for both kinds of enrollees, providing one accounts for differences in benefit packages and population characteristics (33–35).

More relevant are studies that show changes in people's use patterns after joining an organized plan; even more persuasive are those that provide contemporaneous comparisons with control groups outside the plan. Corbin and Krute (36) reported on seven instances in which, in 1970, persons eligible for Medicare benefits had enrolled in prepaid group practice plans, and the plans were reimbursed on a per-capita basis for these enrollees as well as for their regular enrollees. When the reimbursement per Medicare beneficiary in each of these plans was compared with the reimbursement for a control group of Medicare beneficiaries who lived in the same locations but received care in the usual manner, payments for physicians' services were found to be somewhat larger in all the plans, but hospital payments, as well as total payments, were smaller in all but two of the plans. Unfortunately, no data are given on the use of service.

There have also been studies of the experience of persons actually or potentially eligible for Medicaid. For

example, Alpert and associates compared the use of services by children in two similar groups of low income families before and after one of the two groups was enrolled in a program of "comprehensive, family-oriented care" (37). The experimental group used somewhat more ambulatory care, but this was due to the much larger number of preventive visits; visits for illness were reduced. Hospital care was also much less frequent.

Bellin and associates reviewed the experience of a small panel of welfare patients before and after they joined a neighborhood health center. Over a period of 2 years, admissions to the hospital were reduced by 69 percent, the average length of stay was reduced by 35 percent, and patient days were reduced by 80 percent. Unfortunately, there were no comparable data for non-hospital services (38). Perhaps more convincing is a study by Fuller and Patera of the experience of a sample of Medicaid beneficiaries who elected to receive care from a prepaid group practice plan in Washington, D.C. (39). The sample was selected from a larger group of volunteers so as to match the composition of the general Medicaid caseload, excluding those under 1 year and over 64 years of age. A comparison of the experience of the sample for up to 22 months before joining the group practice plan with the experience 22 months after joining the group practice plan, and also with the more recent experience of the Medicaid caseload as a whole, made clear that there was some reduction in the volume of physicians' visits, a marked reduction in hospital admissions and hospital days, and considerable savings in cost. A more detailed examination of hospital utilization showed savings in hospital care for obstetrical patients, savings that were achieved by a 15 percent reduction in length of stay. Surgical and medical admissions were roughly halved, with some compensatory increase in average length of stay, a result suggesting that the patients admitted were more seriously ill.

A review of the literature leaves little doubt that there has been considerable use of unnecessary and inferior services under Medicaid, although we have not even touched on the scandal of our nursing homes. However, there is no convincing direct evidence that use of unnecessary and inferior services is more prevalent or more serious among Medicaid beneficiaries than among other segments of the population. It could be argued that everyone is about equally exposed to receiving care of good, indifferent, or poor quality (40). If so, the contribution of Medicare and Medicaid has been to increase the exposure to the prevalent mix. This is a conclusion difficult to rebut, but one that I seriously question. One reason for doubt is what we know about the sources of care for the poor, generally, and for Medicaid recipients, in particular. At least in the larger urban centers, only a small subset of physicians care for the majority of Medicaid beneficiaries, and this subset appears to have a large proportion of elderly general practitioners, often foreign trained and without meaningful hospital affiliations, who practice

under adverse circumstances, have very large caseloads and provide assembly-line, episodic, crisis-oriented medicine. For example, Anderson reported from California that about 5 percent of the physicians there provided 45 percent of the Medicaid services (25). Bloom and associates reported that of 1,700 physicians in Cook County, 100 handled 70 percent of the welfare caseload, and that only 40 percent of these 100 had hospital affiliations, compared with 80 percent of the entire group (41). These authors reported that "there have been documented instances of physicians 'seeing' over 150 welfare patients a day, which is more than the number of private patients seen in a week by the average physician" (41a).

Kavaler reported that in New York City 5 percent of the physicians who had Medicaid patients accounted for 25 percent of the Medicaid payments, and that 5 percent of the dentists accounted for 38 percent of such payments. She described a subset of "high volume" Medicaid physicians who were general practitioners, of whom about 90 percent were in solo practice, about a quarter were "completely unassisted by clerical or paraprofessional help," and about 30 percent were "almost exclusively serving Medicaid patients" (29a). These physicians put in long hours, "overworked by [their] patients and abandoned by [their] colleagues" (29b). Although 65 percent had hospital affiliations, 42 percent of these were with proprietary hospitals.

Of course, Medicaid is not responsible for these conditions. It has merely failed to correct them. In addition, it may have encouraged a small shift away from institutional care to this rather unsavory sector of private care. But the consequences of this shift are not unequivocally clear, since the quality of ambulatory care in the institutions that have ordinarily served the poor has not, itself, always been high.

On the credit side, the availability of revenue under Medicaid and Medicare may have encouraged the establishment, or permitted the survival, of neighborhood health centers and similar organized programs that have served the poor, but regrettably only a small proportion of them. Morehead and associates have provided a reasonably accurate estimate of the quality of care in such settings, based on a review of medical records (42, 43). They reported that the quality of basic medical workup in a reasonably representative selection of 35 of 50 Office of Economic Opportunity neighborhood health centers extant around 1968 was comparable to that in an admittedly unrepresentative selection of 10 outpatient departments of hospitals affiliated with medical schools (42). This comparability, if valid, is no small achievement, since 10 of the neighborhood health centers were in rural areas. In such areas the alternative would have been care of much poorer quality, if one is to judge by an examination of the records of a small number of rural general practitioners that was also conducted by Morehead and associates. It is also true, however, that in the outpatient depart-

ments, as well as in the neighborhood centers, the scores attained ranged around 60 percent of a possible 100, and that the neighborhood health centers included some instances of aberrantly inferior care, especially in pediatrics.

A more recent report by Morehead and Donaldson on the quality of clinical management of selected diagnostic categories shows that more than two thirds of the centers studied were rated "satisfactory." However, the rating of satisfactory is based on rather modest expectations, and it is also true that less than satisfactory ratings (categories III and IV) were given to 31 percent of the pediatrics, 25 percent of the medical, 12 percent of the gynecological, and 4 percent of the obstetrical departments in the health centers studied (43).

Summary and Conclusions

In recent years the growth of health insurance and the gradual expansion of public programs have been accompanied by increased use of physicians' and hospital services. This increase in use has been more rapid for the poor than for the rich, so that differences by income first were abolished and then tilted in favor of the poor. This progression started earlier and has gone further for hospital care than for the services of physicians, and it has not been equal for all population subgroups. The effect of Medicare and Medicaid has been to speed along this progression by increasing the use of services among segments of the population that were previously relatively deprived. However, this added push, and all the events that have accompanied it, apparently have not been sufficient to enable us to achieve equal service for equal need across the nation. Use of services, nationwide, is still less, relative to crude measures of illness and disability, among the very poor, rural residents, and blacks. In some urban areas that are rich in benefits and resources, near parity may have been achieved in the volume of care. However, differences persist in the range of choices available as sources of care, in the amenities these sources offer and, most probably, in the technical quality of the care that they provide.

As to quality, the major immediate contribution of Medicare and Medicaid has been to increase the use of health services. With this advantage has come the associated disadvantage of greater exposure to the hazards of unnecessary and inappropriate care. It is likely, although it is debatable, that this hazard is greater for the beneficiaries of Medicaid than for the general population. The reason is partly that many of the practitioners and some of the institutions that serve the poor do so under a variety of handicaps, often in an environment in which the incentives for self-control are weak and the mechanisms of external control are absent or ineffectual. Thus, in this respect, as in many others, the poor are more easily victimized. Nevertheless, in my opinion, the net effect of Medicare and Medicaid has been more and better care.

In the long run, the greatest single contribution that Medicare and Medicaid will have made to the quality of care is to have focused attention on it, to have documented its failings, and to have asserted and institutionalized public responsibility for it. It is a giant step from the early beginnings of modest restrictions on provider participation and the simple provisions for utilization control to the full-fledged phoenix of the PSRO (professional standards review organization). One must stand in awe and wonder as this miraculous creature slowly unfolds its wings to cover the whole of medical care, no matter how it is provided.

Thus, with respect to the quality of care and the utilization of service, as with respect to many other effects, the significance of Medicare and Medicaid is not so much in what they are, important as that is, as in what they portend. Their accomplishments, as well as their failings, have whetted the appetite for more. They have cleared the way for something astoundingly larger. Let us hope that it will also be better.

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